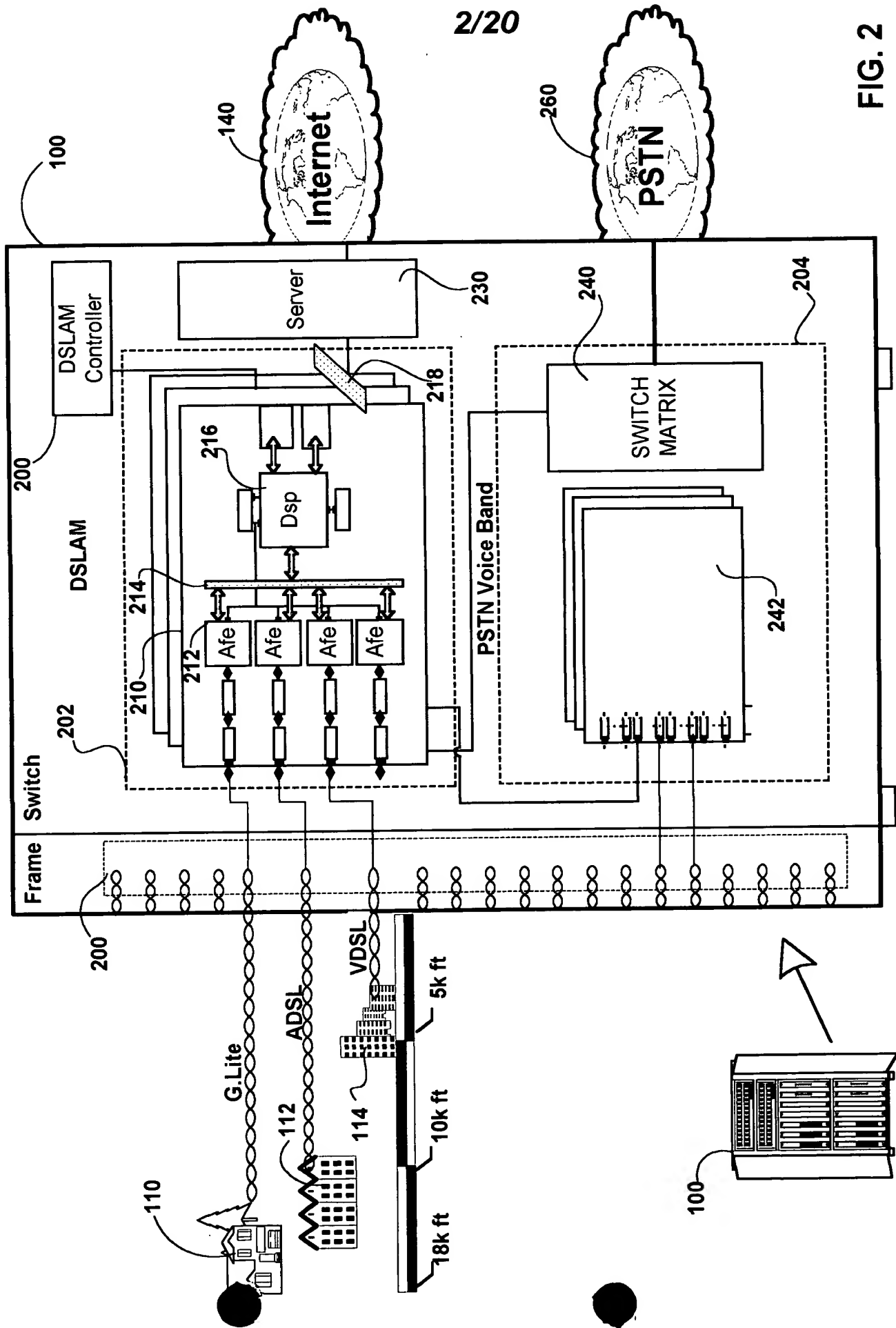


FIG. 1

Packet Based distributed xDSL System



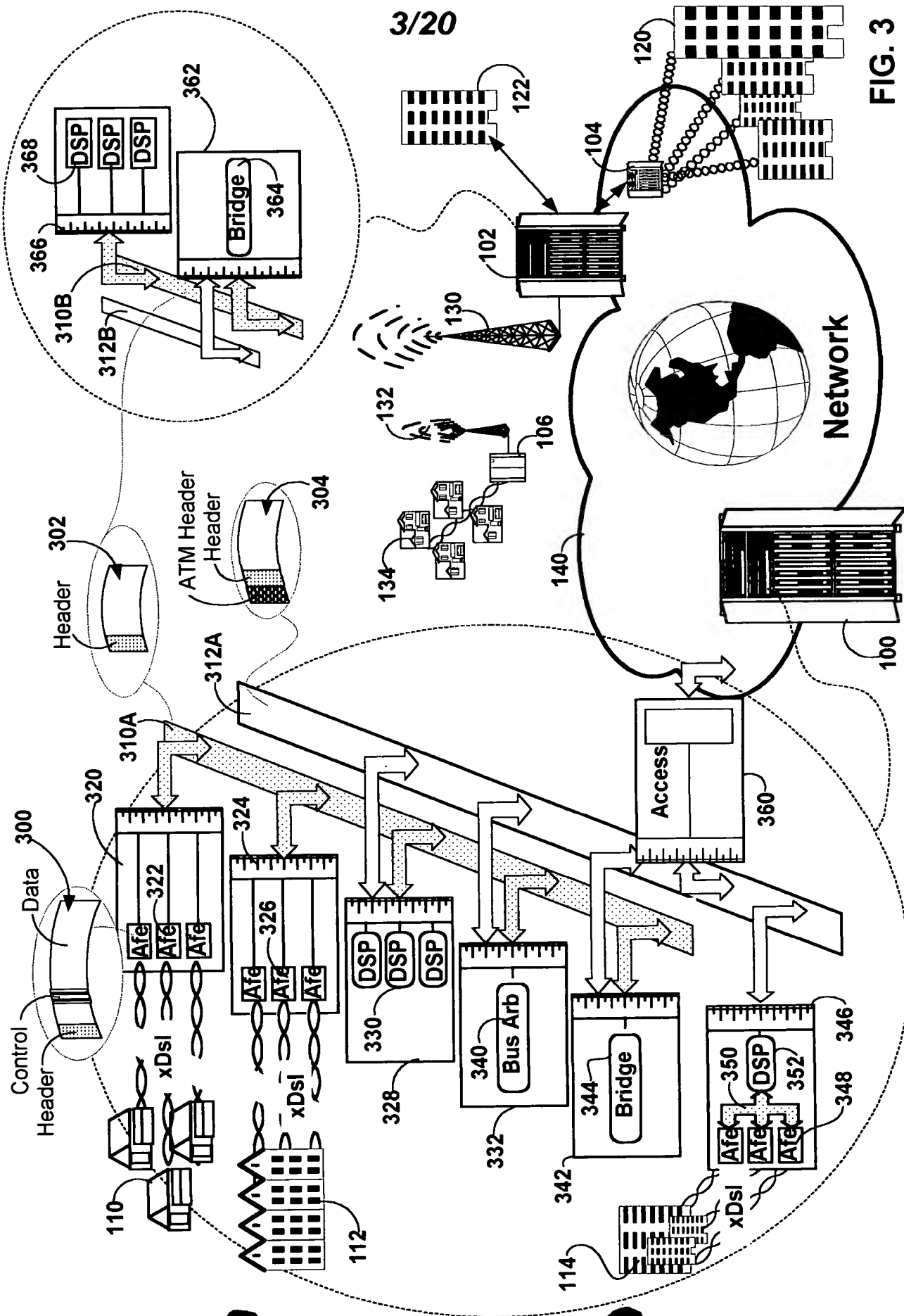


FIG. 3

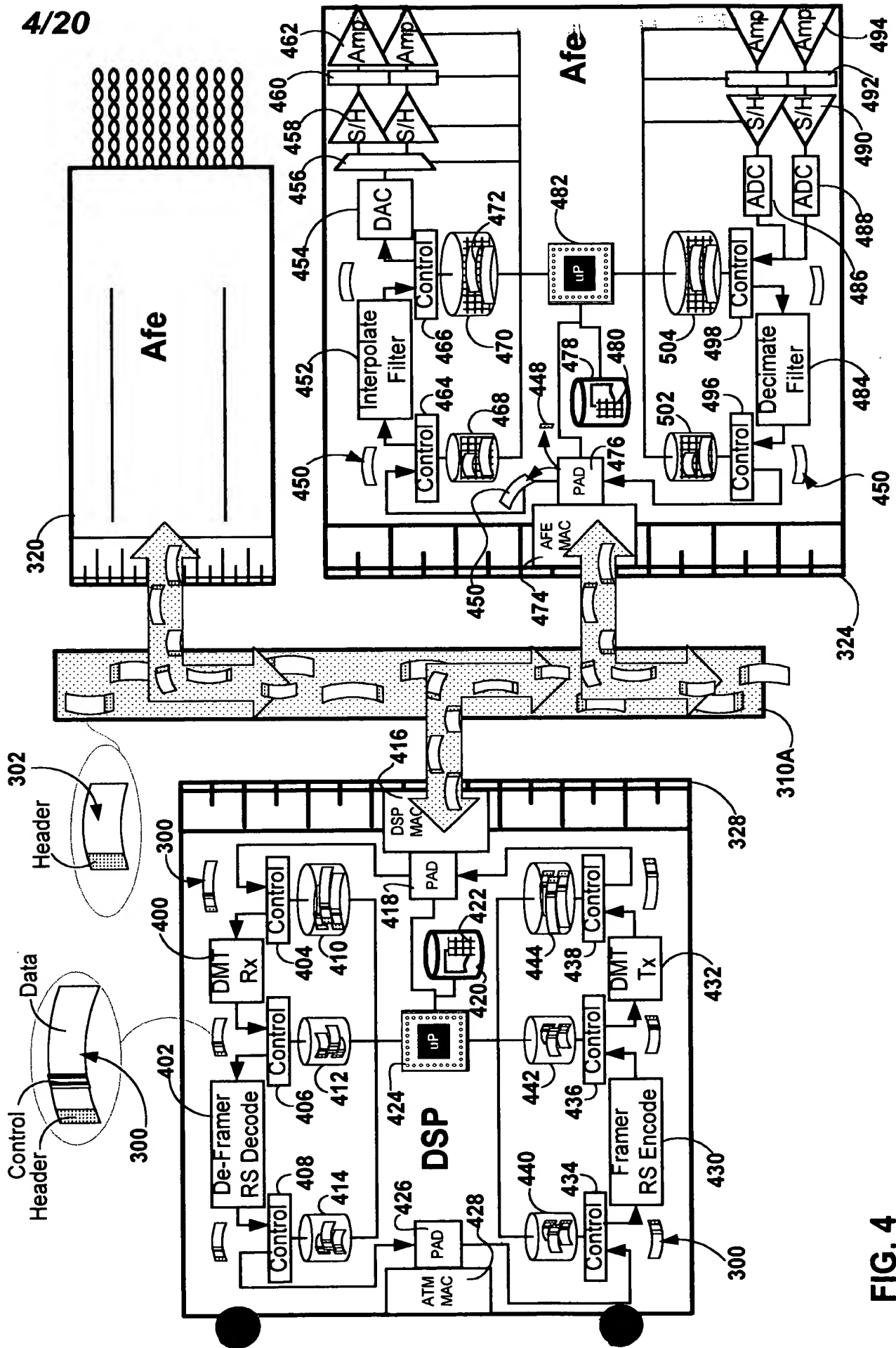


FIG. 4

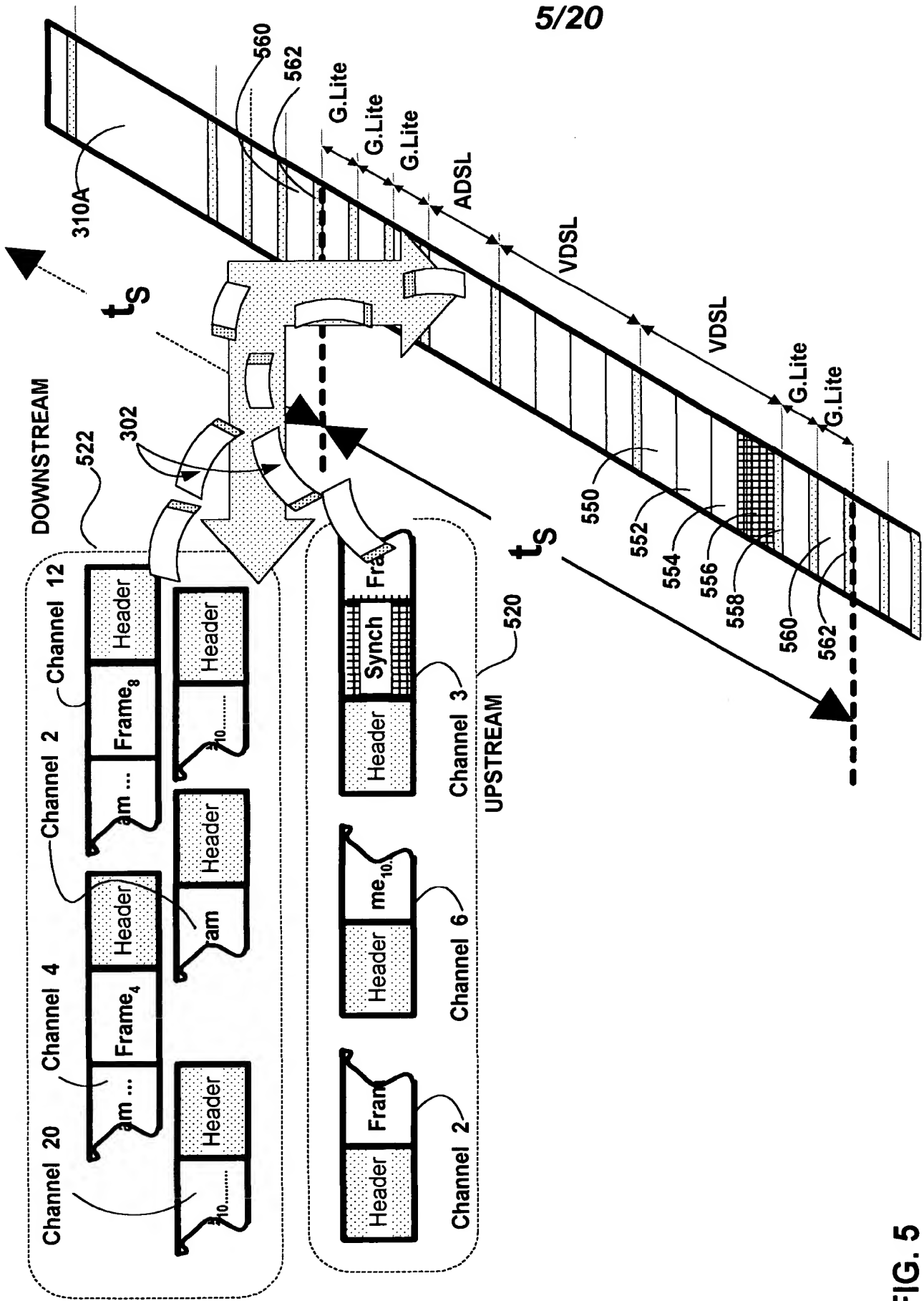
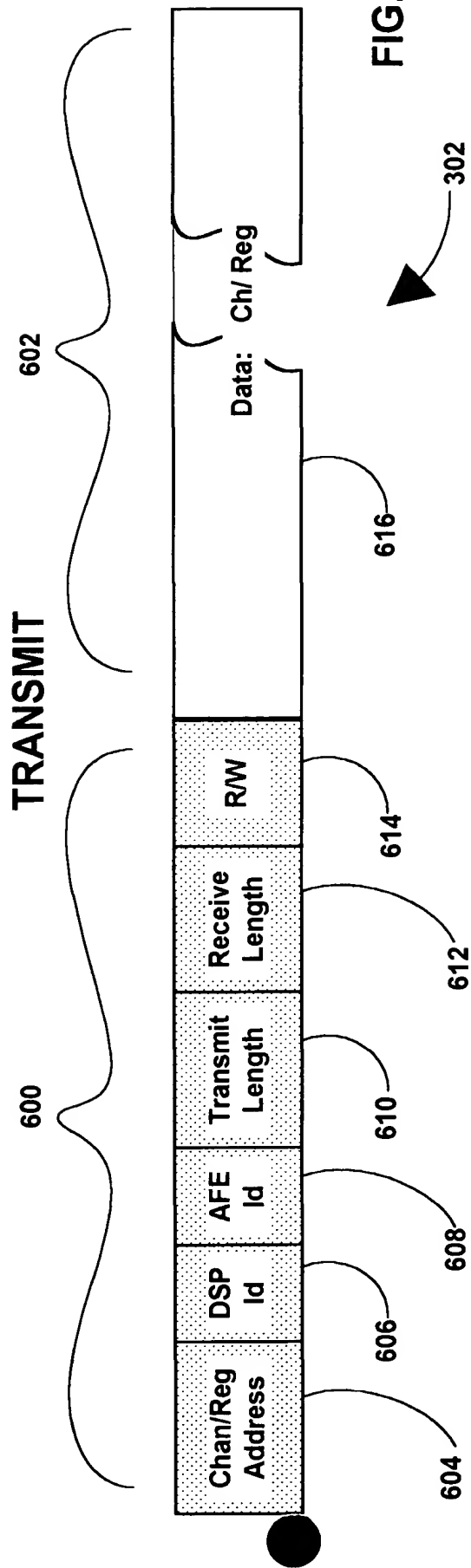
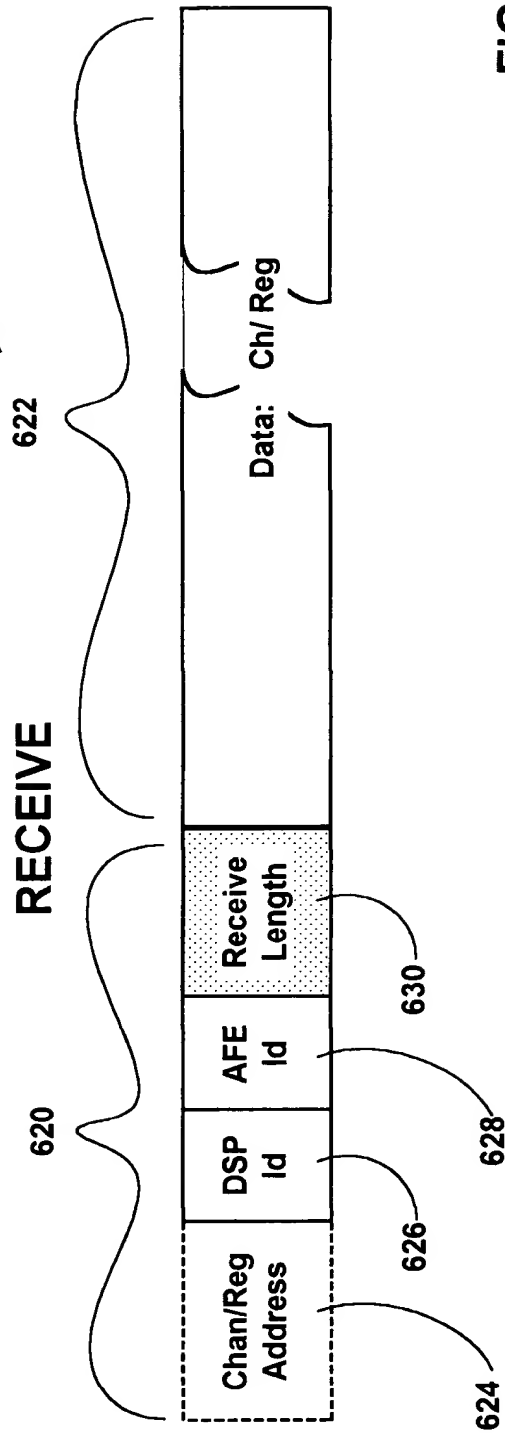


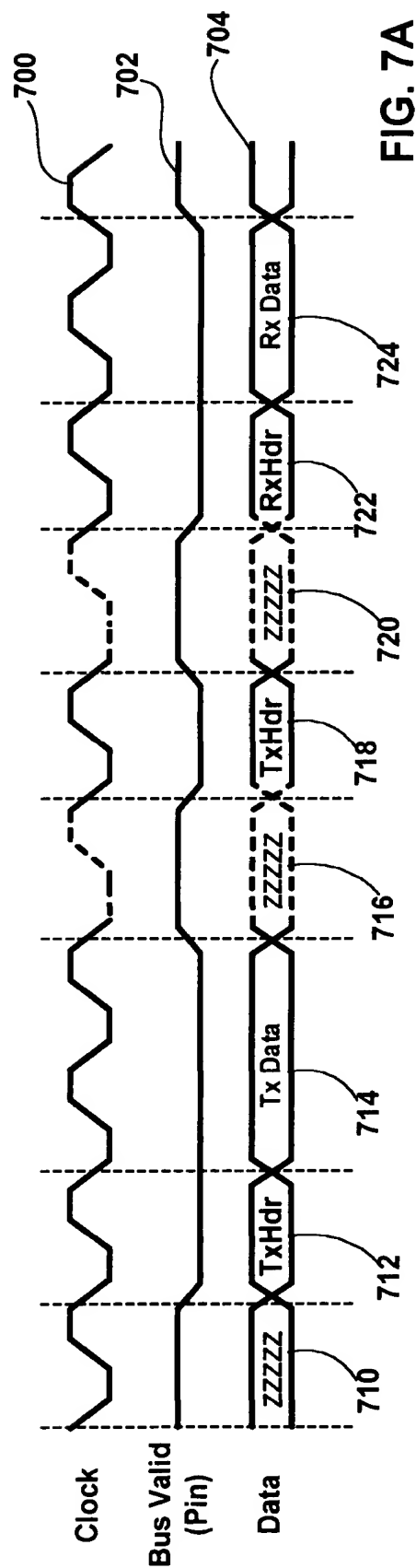
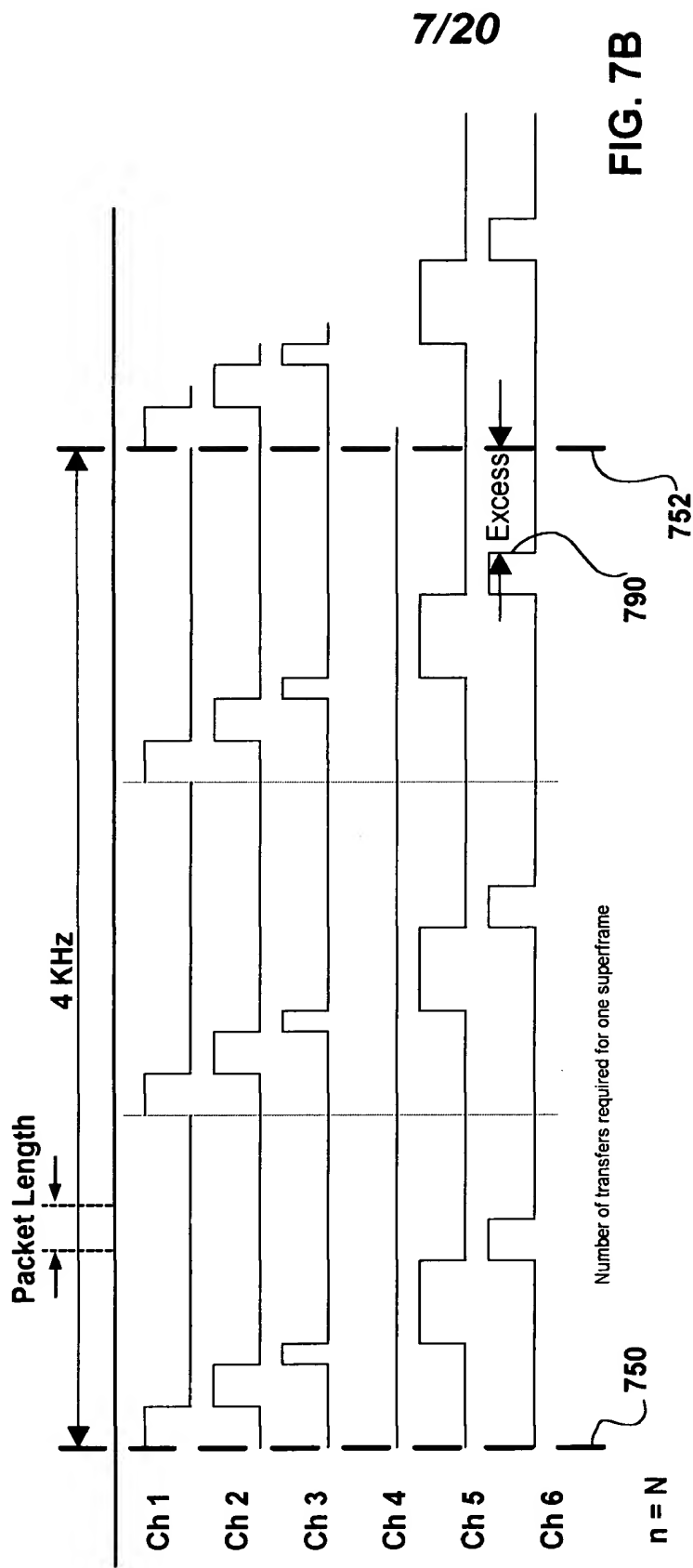
FIG. 5



BUS PACKETS

6/20





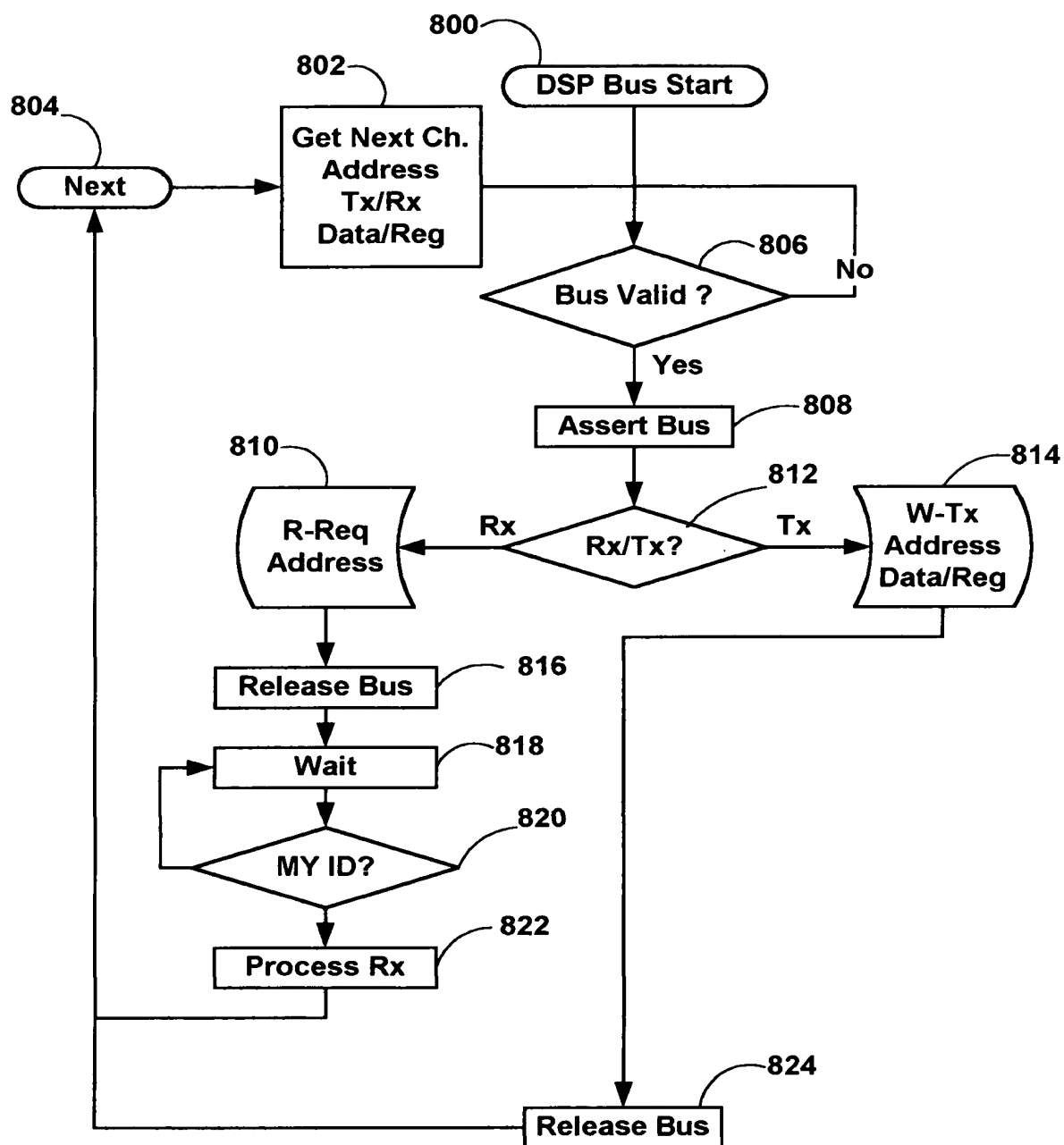


FIG. 8A

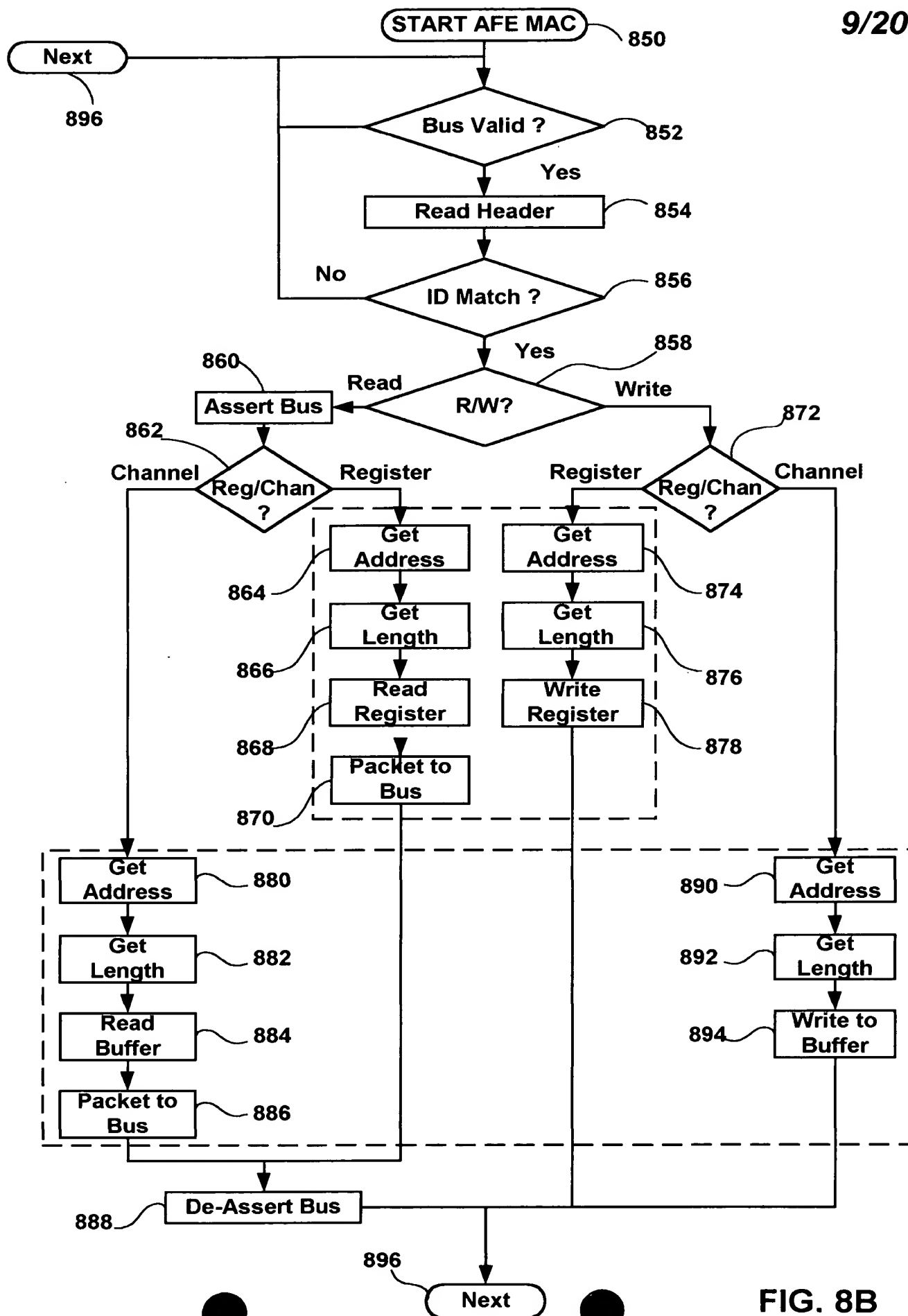


FIG. 8B

10/20

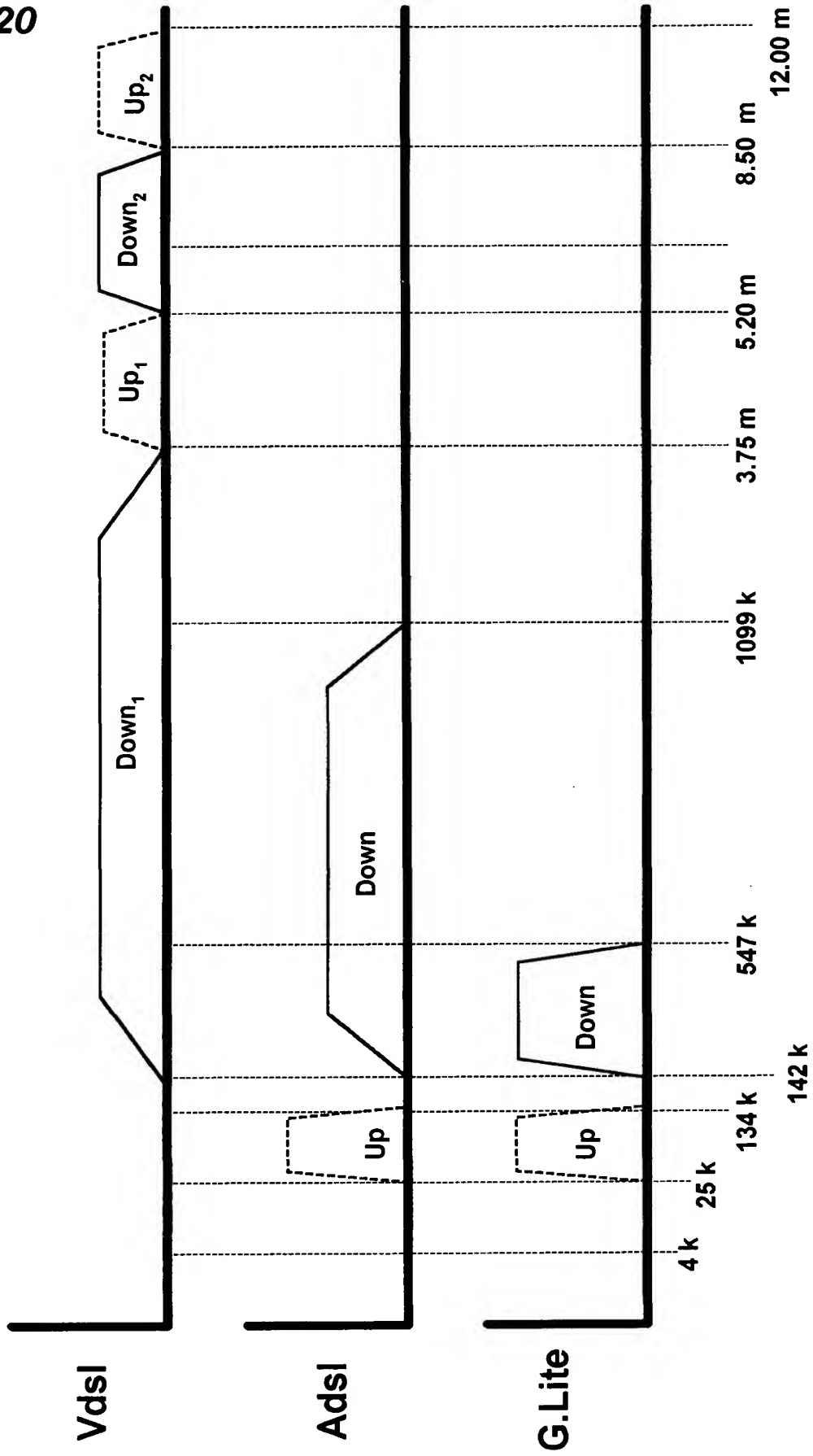


FIG. 9

Component
Parameters
TRANSMIT

● DSP

	G.LITE	ADSL	VDSL	Other
Sample space	256	512	512 , 1024, 2048, 4096	
# Tones	128	256	256, 512, 1024, 2048	
Cyclic Prefix	16	32	Programmable	
	● ●	● ●	● ●	● ●
Switching	High Pass Filter	High Pass Filter	None	

FIG. 10A

● AFE

Interpolator	8x	8x	4x
Digital Filter	552 kHz	1.104 MHz	3.75 MHz, 8.5MHz
Noise Shaping			
DAC	8 Channels	8 Channels	1 Channel
Amp	17.4 dbm	20.4 dbm	11.5 dbm
	● ●	● ●	● ●
Switching			

FIG. 10B

001240" 54402960

Component
Parameters
RECEIVE

DSP

		G.LITE	ADSL	VDSL	Other
Sample space		64	64	512 , 1024, 2048, 4096	
	# Tones	32	32	256, 512, 1024, 2048	
	Cyclic Prefix	4	4	Programmable	
Switching		• •	• •	• •	• •

FIG. 10C

12/20

AFE

Amp Gain Ctrl				
Analog Filter	138 kHz	138 kHz	5.2 MHz, 12.0 MHz	
ADC	64x 1bit	64x 15bit	2 x 11 bit Linear	
	SigmaDelta	SigmaDelta		
Decimator	8 Channels	8 Channels	1 Channel	
Switching	• •	• •	• •	• •

FIG. 10D

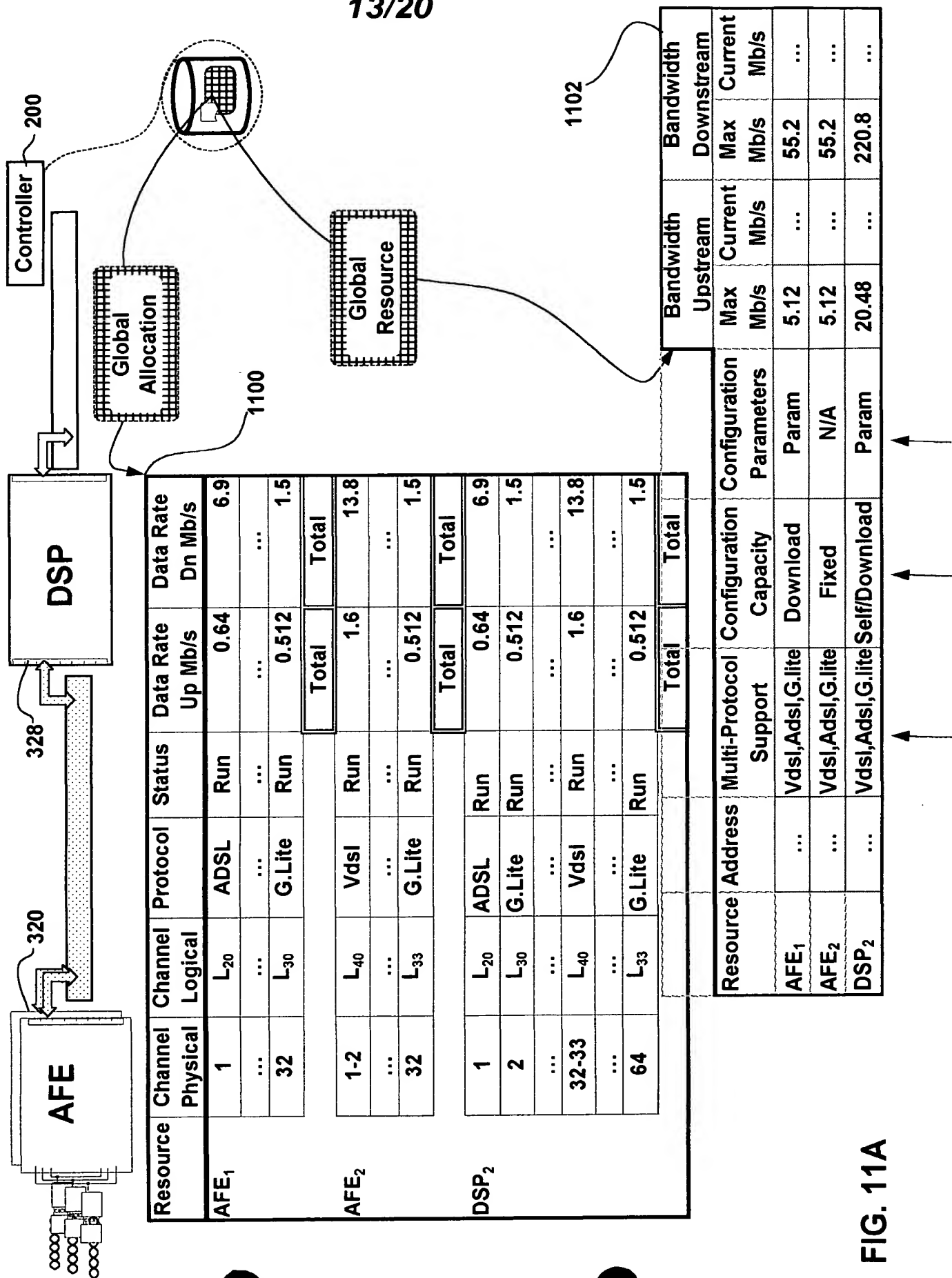
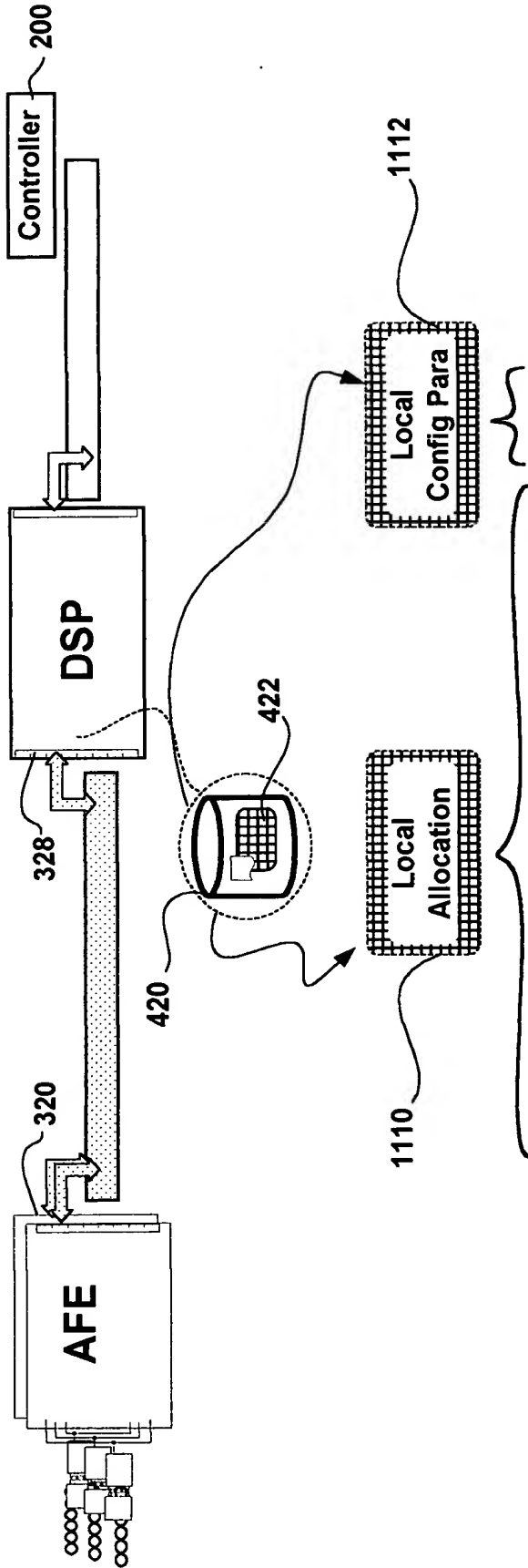


FIG. 11A



Resource	Address	Channel Physical	Channel Logical	Protocol	Config Param
AFE ₁	...	1	L ₂₀	ADSL	Param
	Param
	...	32	L ₃₀	G.Lite	Param
DSP ₂	...	1	L ₂₀	ADSL	Param
	...	2	L ₃₀	G.Lite	Param
	Param
	...	32-33	L ₄₀	Vdsl	Param
	Param
	...	64	L ₃₃	G.Lite	Param



Newer Standards
Country Specific Standards
Enhanced Performance
parameters e.g. Upgrade 10-
7 BER to 10-12 BER
Increase usage of RS
coding or Verterbie Coder

FIG. 11B

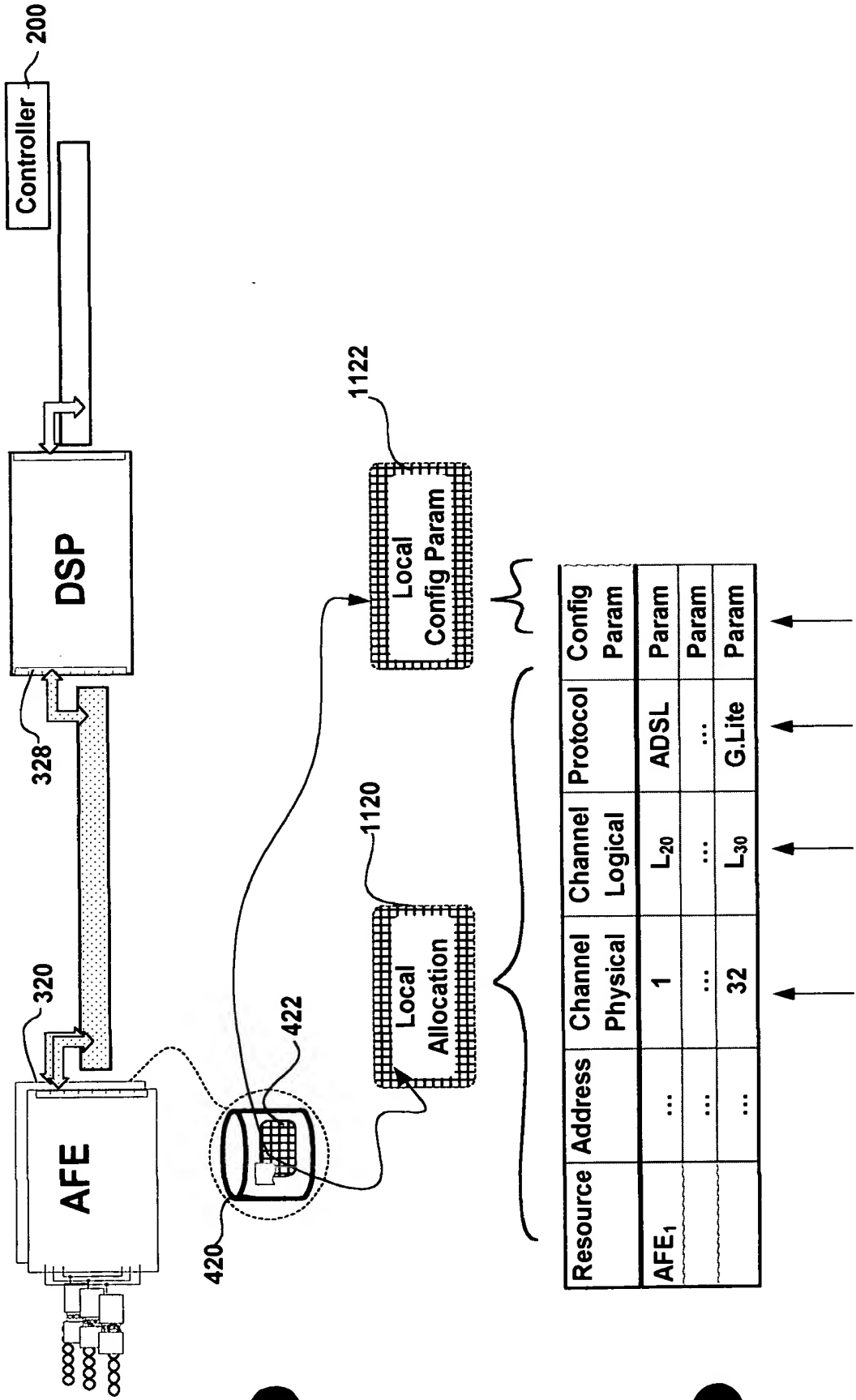


FIG. 11C

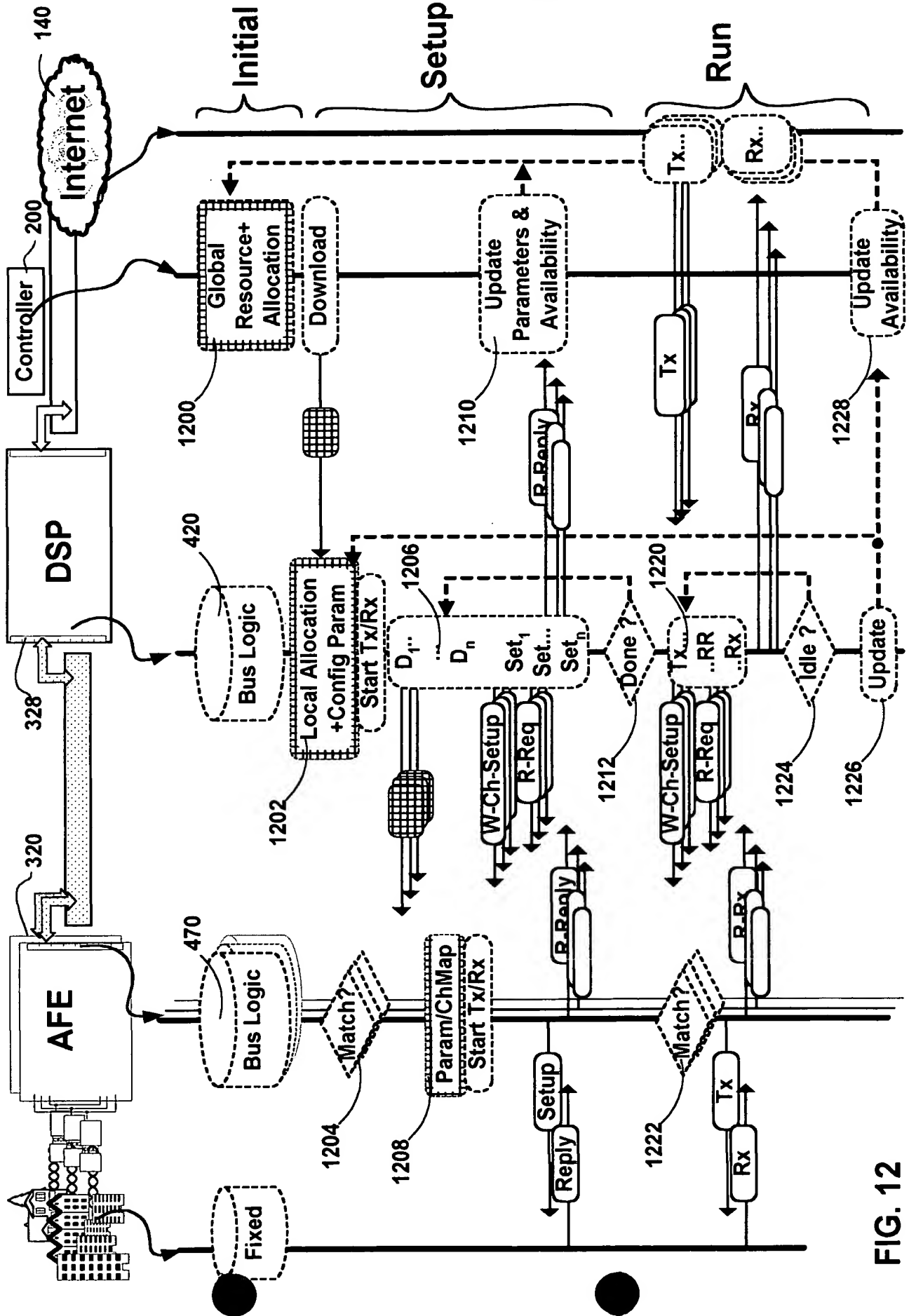
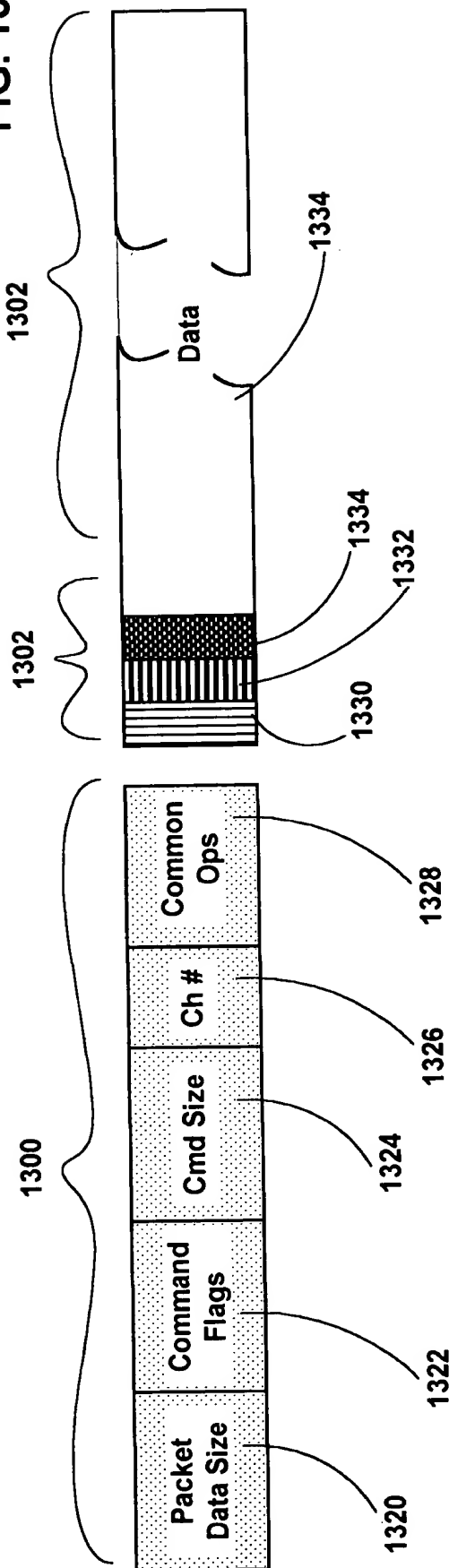


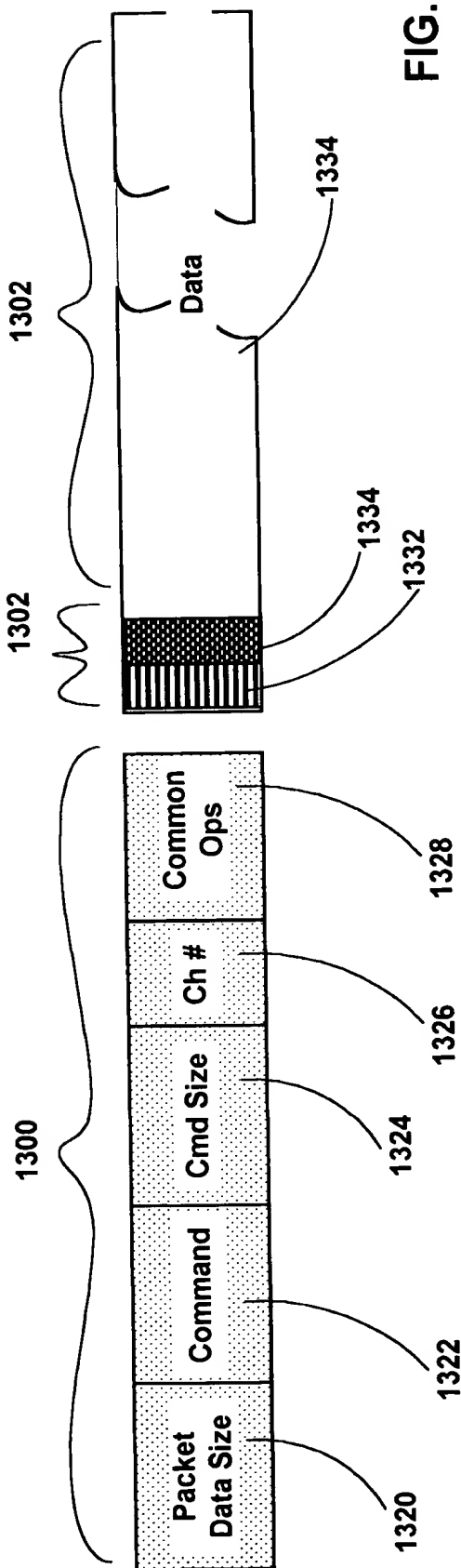
FIG. 12

FIG. 13A



DSP PACKETS

FIG. 13B



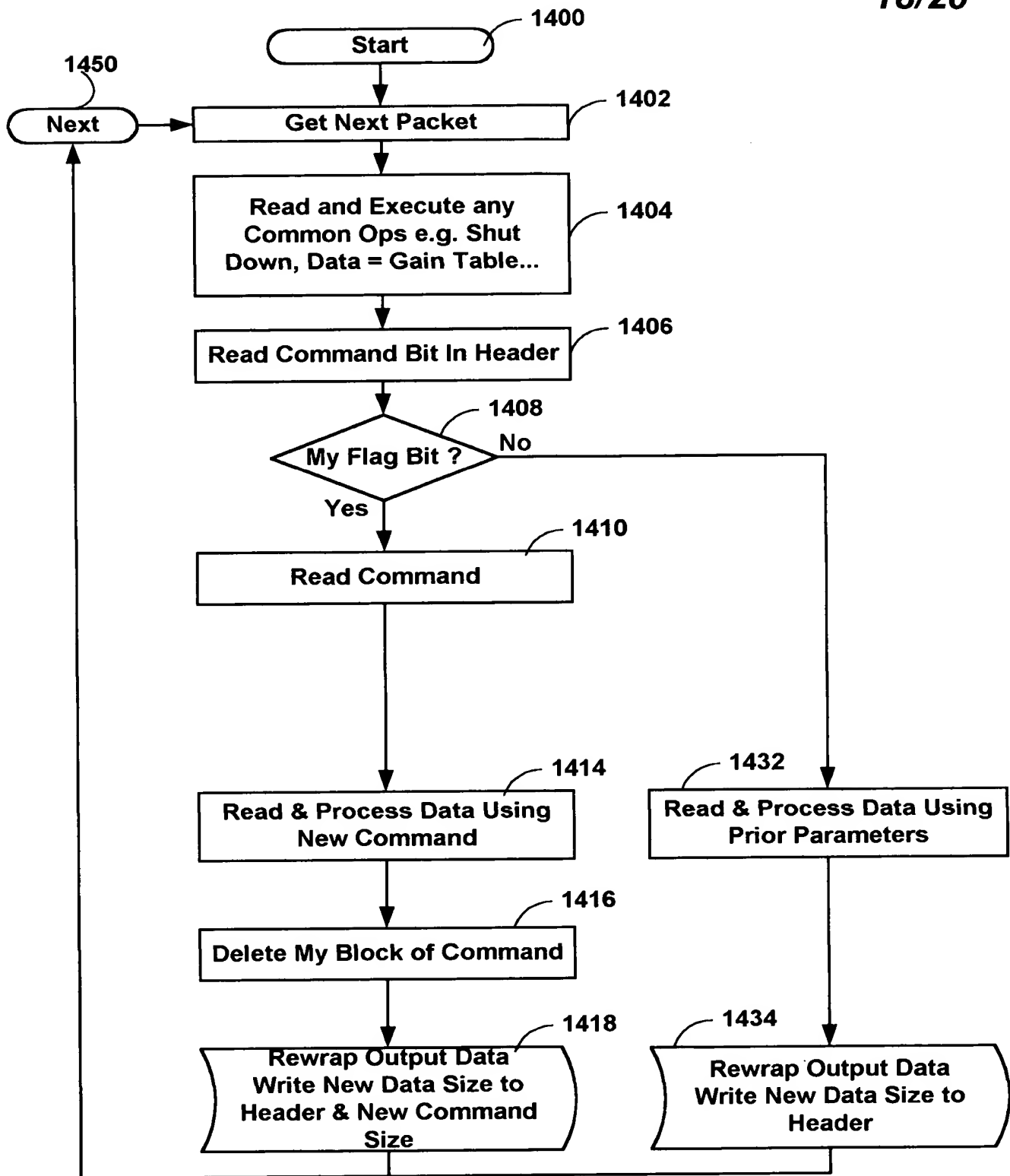


FIG. 14

001220" 62202960

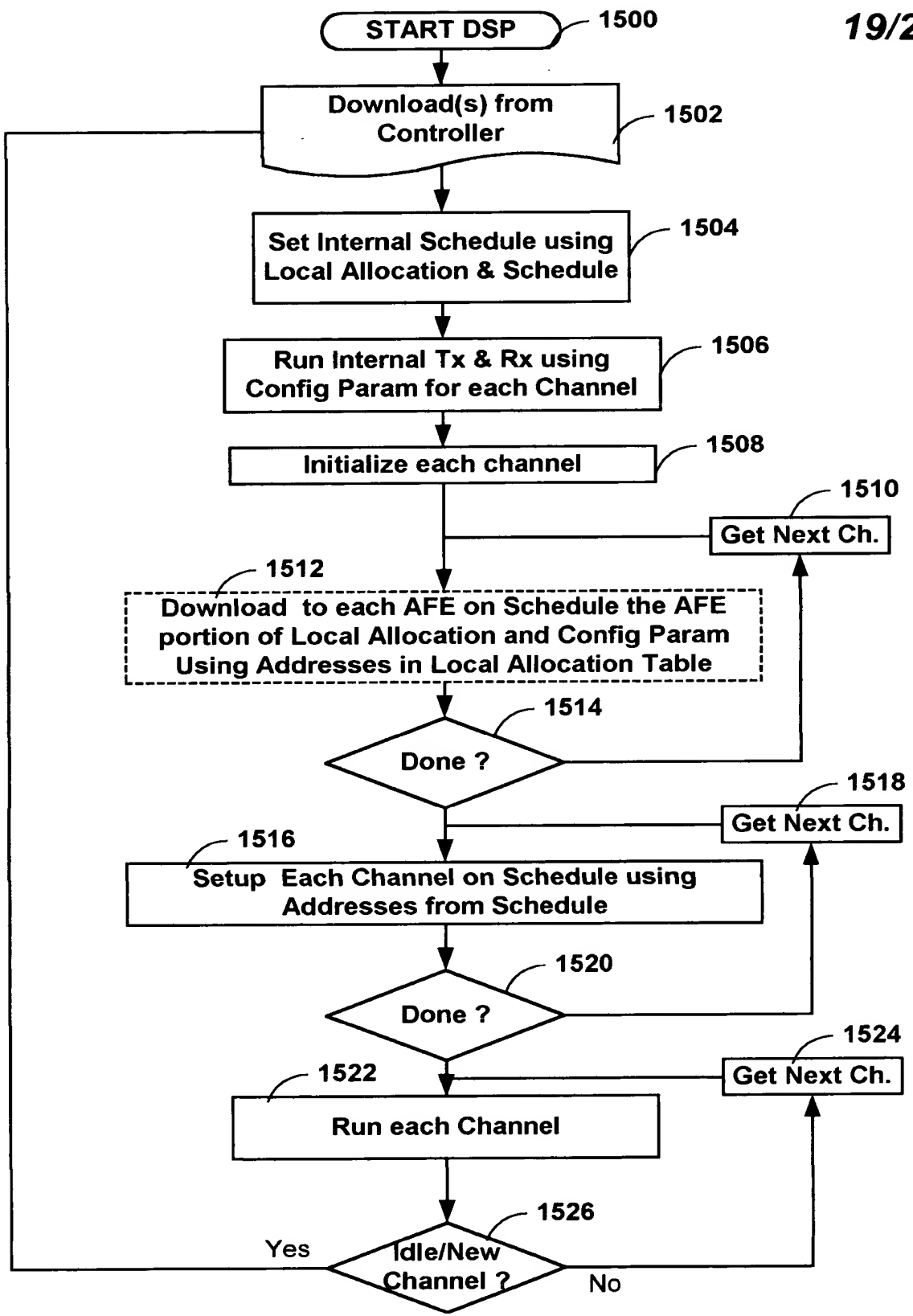


FIG. 15

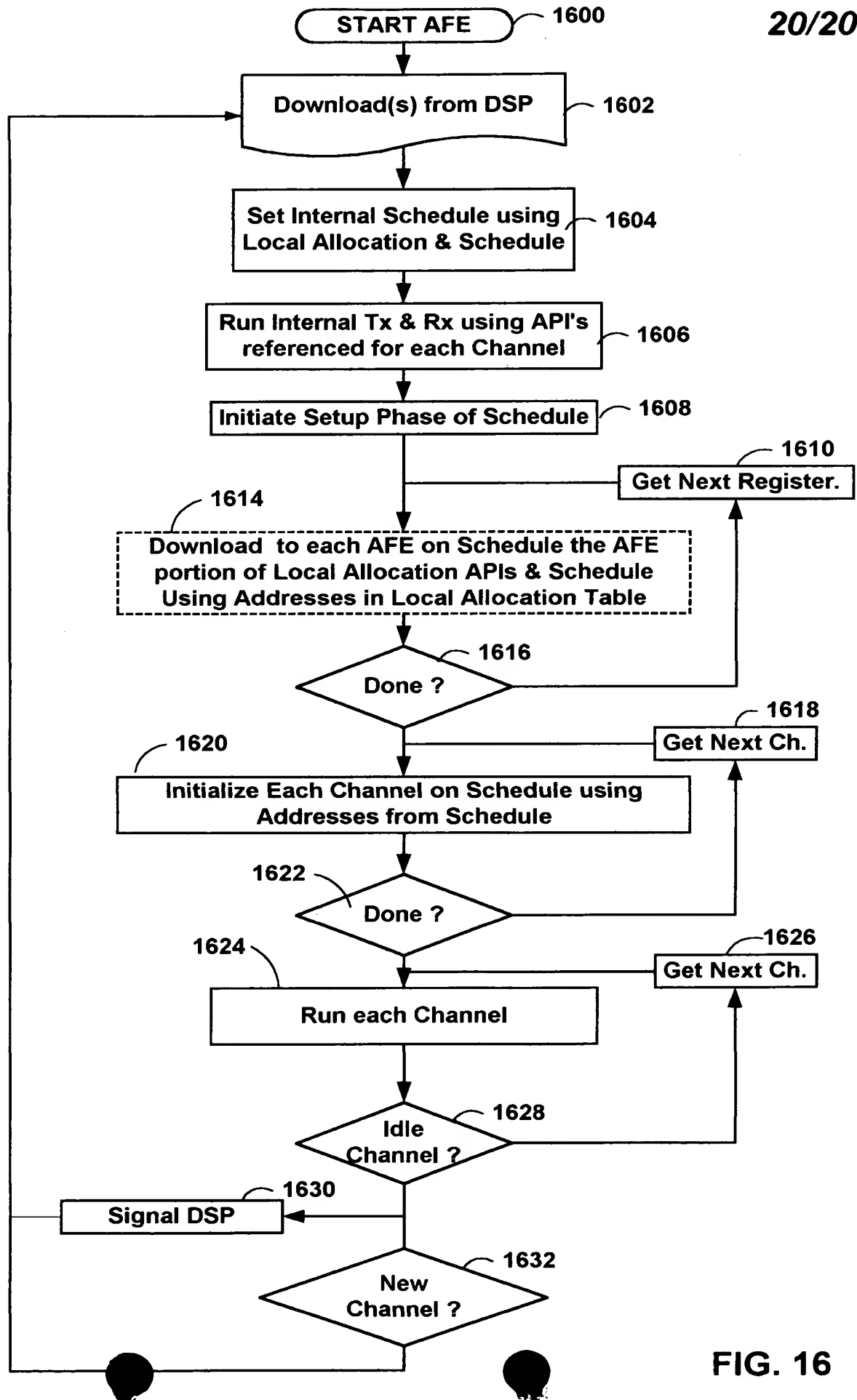


FIG. 16